Glendale Tracks Growth with Gross City Product

Although the economy of the metropolitan Phoenix area is recognized as one of the more vigorous in the nation, the task of actually recording and analyzing its economic growth is made difficult by the absence of economic indicators at the city level. The most frequently cited growth indicator, population, measures neither production nor dollars. Further, population statistics tend to lose reliability between censuses. Personal income, useful for recording economic performance at the state level, is not available for cities.

Responding to the need for a dollar-denominated indicator of economic growth for cities, analysts from the Center for Business Research and the city of Glendale, Arizona (adjacent to Phoenix on the northwest side), developed a measure of Glendale Gross City Product. Gross City Product (GCP) is analogous to Gross State Product (GSP) for Arizona or Gross National Product (GNP) for the United States. GCP is an estimate of the market value of final goods and services produced within the city limits of Glendale – the "value added" to the Arizona economy by Glendale economic activity.

GCP is superior to other economic indicators at the city level, such as building permits or retail sales, because it measures economic output across all sectors of the economy. In addition, it represents the returns to all factors of production. Thus, GCP includes not only labor income but also interest income, profits, and imputed rents.

CALCULATING GCP

In brief, the methodology for computing the Glendale GCP is based on an employment-weighted share of the Arizona GSP. While GSP data are available quarterly from the Center for Business Research, cities wishing to construct their own GCP measure must develop a reliable procedure for estimating city employment.

Glendale estimates employment by using sampling methods to supplement figures supplied by the Labor Market Information Section of the Arizona Department of Economic Security. Employment estimates from the Maricopa Association of Governments were used to update the original employment series.

RECORDING GROWTH

The Glendale GCP series begins with the 1983 values (see Table 1). Arizona GSP was $37.8 billion in 1983, and Glendale GCP was $716.1 million, about 1.9 percent of the state total. By the end of 1986, Arizona GSP had increased 36 percent, to more than $51 billion. Meanwhile, Glendale GCP had increased 70 percent, accounting for 2.4 percent of total state product.

The Center for Business Research has developed an Arizona-specific price index for deflating GSP. Inflation-adjusted or "real" growth figures for Arizona and Glendale can be compared to those of the nation as a whole (see Figure I).

National growth became sluggish after 1984, the year GNP grew 6.5 percent. In 1985 and 1986, national growth sank below its long-term trend of approximately 3 percent. Similarly, Arizona growth dipped below the long-term trend of real GSP in 1986, accelerating only 4.8 percent. Glendale growth weakened slightly in 1985, falling to 10.7 percent, but surged in 1986 to 18.7 percent. Evidence from its GCP places Glendale among the faster growing communities not only in Arizona but in the nation.

CONCLUSIONS

In spite of widespread interest in economic development, few cities in the nation use a comprehensive measure of economic performance

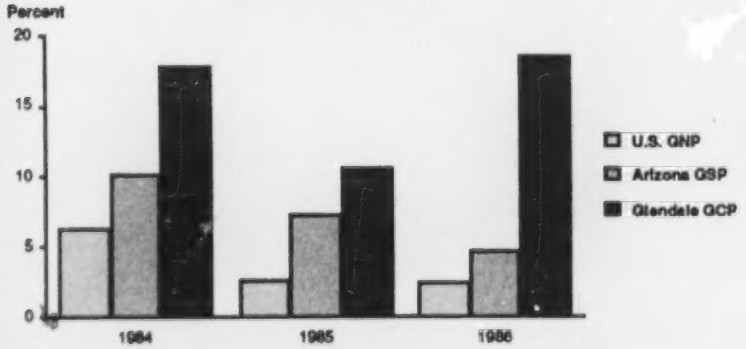
See "GCP," page 15

TABLE 1
GROSS PRODUCT, BY YEAR

Gross Product (in millions)	1983	1984	1985	1986
United States	$3,277,700	$3,492,000	$3,998,500	$4,199,100
Arizona	37,821	43,156	47,873	51,372
Glendale	716.1	871.2	999.8	1,215.9
Gross Product (in millions of 1982 dollars)				
United States	$3,277,700	$3,492,000	$3,570,000	$3,666,800
Arizona	37,251	39,966	42,901	44,970
Glendale	684.5	807.0	893.0	1,060.3

Source: U.S. Department of Commerce (GNP data); Center for Business Research (GSP data); and city of Glendale (GCP data).

FIGURE I
ANNUAL GROWTH OF GROSS PRODUCT
(1982 Dollars)



Source: U.S. Department of Commerce (GNP data); Center for Business Research (GSP data); and city of Glendale (GCP data).

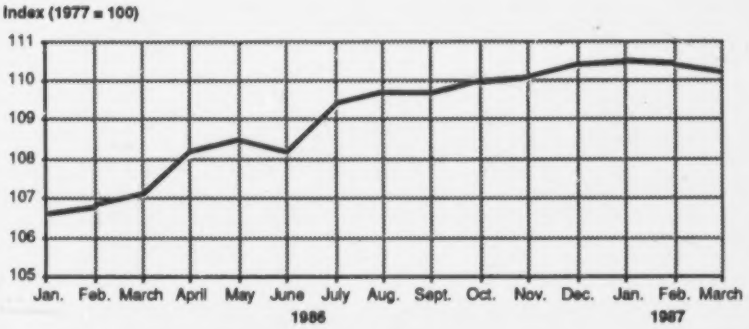
Arizona Leading Index Continues Slide in April

The Arizona Index of Leading Economic Indicators declined in April for the third consecutive month, to 109.9, from a revised 110.1 in March (see Figure I).

Five of the 10 index components dipped in April. Seasonally adjusted components derived from a survey of Arizona purchasing managers were mixed. Purchased materials inventory levels, new orders, and production all recorded decreases. Delivery time increased, and employment was unchanged.

After declining for two months, the national money supply (M2) grew slightly, and sensitive materials prices registered no change. The third consecutive monthly decrease in the Arizona average workweek – to exactly 40 hours – was favorably offset by a reduction in the number of first-time unemployment insurance claims. Residential building permits declined for the second month in a row.

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Economic Outlook Center, College of Business, Arizona State University

OUTLOOK

The leading index continues to signal sluggish growth for the remainder of 1987, having peaked in January at 110.5. Since then, it has taken a gradual but clearly downward course, approximately negating each gain of fourth quarter 1986.

Although three consecutive months of decline warrant attention from those who follow the economy, the monthly decreases have been much smaller than those that normally precede a recession. Nevertheless, it is worth noting that at the January index peak, the calculation formula for the probability of a recession yielded a value of 3 percent. As of April, the probability had increased to 13 percent.

– **Lee R. McPheters**, *Director*
Economic Outlook Center

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution*			
	Jan.	*Feb.*	*Mar.*	*Apr.*
Delivery Time**	-.10	.08	.04	.01
Inventory Levels**	.03	-.01	.10	-.08
New Orders**	.09	-.03	.07	-.05
Production**	-.01	.00	.06	-.04
Employment**	.10	.05	.01	.00
Residential Building Permits	-.19	.25	-.05	-.07
Unemployment Insurance Claims	.20	.01	-.13	.09
Average Workweek, Manufacturing	.09	-.07	-.07	-.09
Money Supply	.06	-.20	-.13	.02
Change in Sensitive Materials Prices	-.16	-.19	-.11	.00
OVERALL INDEX CHANGE (%)	.1	-.1	-.3	-.2

*The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

**Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Economic Outlook Center, College of Business, Arizona State University

"GCP," from page 14

such as Gross City Product. Instead, they rely on proxy measures, including population estimates and building permits, to track economic growth. The GCP indicator developed for Glendale, Arizona, has proven valuable in preparing the materials requested by financial institutions in connection with bond issues and by site location departments of industrial firms. GCP is an alternative way to record growth that allows ready comparison with activity on the national and state levels.

– **Lee R. McPheters**
– **Larry K. Stephenson**

Dr. McPheters is director of the Economic Outlook Center in the ASU College of Business. Larry Stephenson is Chief Strategic Planner for the city of Glendale.

Two reports are available from the city of Glendale, Arizona, on its Gross City Product. The initial study prepared by the Center for Business Research and city of Glendale staff members, entitled *Glendale Gross City Product and Main Economic Indicators* as well as *Glendale Gross City Product: 1986 Update* may be obtained from the Strategic Planning Department, City of Glendale, 5859 West Glendale Avenue, Glendale, Arizona, 85301; (602) 435-4212.

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT						
(In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	4th Qtr.	51.846	0.4	5.5	NA	NA
Arizona - 1982 Dollars	4th Qtr.	44.902	-0.4	3.1	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	1st Qtr.	198.0	2.3	3.3	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	April	109.9	-0.2	1.6	NA	NA
BUILDING PERMITS						
(Total Dollar Value in Thousands)						
Maricopa County	April	406,920	24	6	1,303,283	-8
Pima County	April	60,148	-21	-30	221,749	-26
Balance of State	April	51,058	6	-14	183,020	-12
Arizona	April	518,126	14	-2	1,708,052	-12
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	April	2,371	-5	-55	9,984	-42
Pima County	April	634	-33	-48	2,813	-22
Balance of State	April	772	-3	-21	3,216	-32
Arizona	April	3,777	-11	-50	16,013	-37
HOME SALES						
Maricopa County - Number	May	5,160	4	24	24,400	11
Maricopa County - Median Price	May	79,500	-0.2	3.8	78,825	4.1
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	1st Qtr.	102	4.1	12.1	NA	NA
Metropolitan Phoenix - Resale Homes	1st Qtr.	122	7.0	14.0	NA	NA
MORTGAGE INTEREST RATES						
(Conventional, 30-year, Fixed-rate)						
Maricopa County	May	10.5	5.0	5.0	NA	NA
POPULATION ESTIMATES						
(In Thousands)						
Maricopa County	1st Qtr.	1,961	1.0	4.2	NA	NA
Arizona	1st Qtr.	3,422	0.9	3.6	NA	NA
ELECTRICAL POWER SALES						
(In Millions of Kilowatt Hours)						
Arizona	April	2,785	-8.1	3.7	11,562	10.7

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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Survey of Readers: Urban Growth

Businesses Enjoy Benefits; Individuals, Society Pay Costs

Urban growth and greater city size produce a net benefit for most metropolitan Phoenix businesses, but a slight net cost for the area's individual residents and for society at large. This result from an *Arizona Business* reader survey confirms generally accepted conclusions on urban growth and increasing city sizes.

The divergence of private and social benefits/costs often leads to continued growth of a city, beyond the size desired by a majority of its residents. Not surprisingly, then, growth of the Phoenix metropolitan area has become a topic of increasing public concern and media attention.

Because the issues surrounding urban growth are complex and subject to considerable disagreement, the Center for Business Research undertook a study to provide factual information. The study emphasized the benefits and costs of growth and greater size to various segments of society. This article reports on the study's two major parts: a literature review and the survey of *Arizona Business* readers.

COST-BENEFIT ANALYSIS

Performing a classical cost-benefit analysis of urban growth is virtually impossible. Varying benefits and costs accrue to each of three major groups: society as a whole, individuals/households/families, and businesses. Many of the costs and benefits are not quantitatively measurable. Even if all of the issues could be quantified, however, the cost-benefit relationship would differ for each of the three groups and by individuals or businesses within the groups.

See "Survey," page 2

1984-85 Migration Patterns Show Little Change

Though the number of people moving from one state to another throughout the United States decreased 3 percent during 1984-85 (the last year for which data are available from the Internal Revenue Service), migration to Arizona increased. Coupled with a decline in out-migration, Arizona's net in-migration rose substantially.

This article updates information presented in the December 1986 *Arizona Business*. That article describes the IRS data and defines terminology used in this update.

NATIONAL MIGRATION PATTERNS

Few states shared Arizona's rising levels of in-migration between 1983-84 and 1984-85; Georgia was the most notable exception. In contrast,

See "Migration," page 7

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6 Need for More Urban Areas
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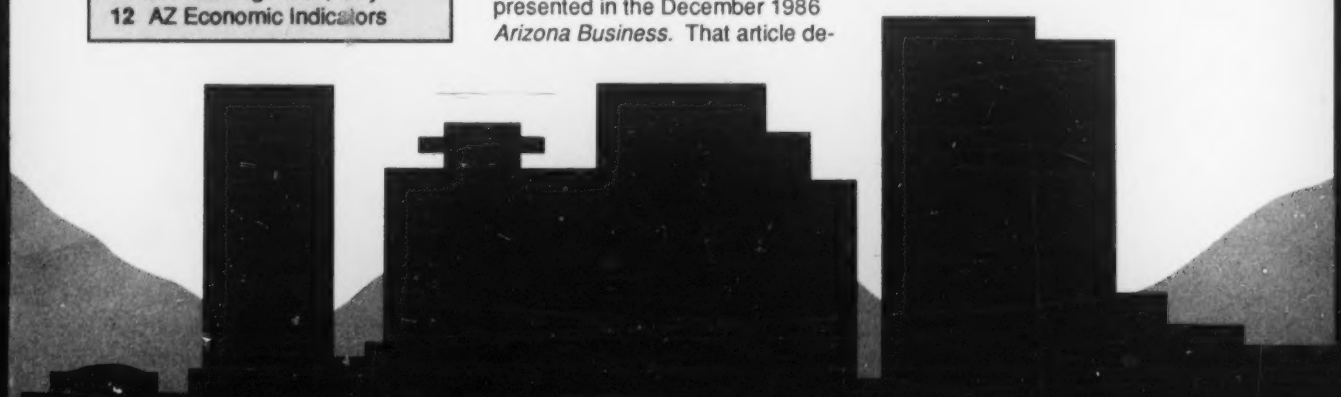

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"Survey," from page 1

Because the issues cannot be quantified, personal perspective plays an important role in weighing the advantages and disadvantages of growth. Thus, determination of a generally accepted, scientifically defensible, optimal city size or growth rate is impossible.

Though the concepts of urban size and growth rate are not completely interchangeable, the costs and benefits of each are highly related, considered together in Table 1. These lists derive primarily from the literature search.

Costs

Many of the costs of urban growth/increasing city size, such as environmental problems, are borne by the public sector – by society at large. These costs impact individuals only indirectly and businesses hardly at all. Further, many of the problems, such as air pollution, are not quantifiable, making their resolution a slow process. Only when society begins to perceive them as extreme, does it actively work toward solutions. Such was the case with traffic congestion in the Phoenix area.

Some of the costs to individuals – those classified as "psycho-social," for example – are vague and subjective. Others, such as higher living costs, are offset by benefits, such as higher incomes. Thus, many of the costs to individuals are in the form of societal problems.

Many of the costs to businesses are negated by stronger benefits. Thus, greater competition may be offset by increased opportunity, and higher costs and taxes may be neutralized by higher profits.

Benefits

Private firms gain many benefits from urban growth, especially in the form of increased opportunity for new customers and higher profits. Further, many of the benefits can be directly measured, even in economic terms.

In particular, the principal beneficiaries of increasing city size and urban growth are those who possess monopoly advantage in the marketplace. Those who own fixed assets, such as land, receive a disproportionately large jump in value from the greater demand that accompanies urban growth. In addition, individuals who own enterprises for which efficiency rises with size or who hold important non-duplicative positions, such as key executives or bureaucrats, are essentially isolated from increased competition and thereby prosper from urban growth.

To individuals, many of the benefits not offset by costs diminish as growth continues. For example, while choices of housing, shopping and entertainment widen as a community grows from a small town into

TABLE 1
BENEFITS AND COSTS OF URBAN GROWTH AND INCREASED SIZE

Benefits	Costs
To Businesses	
Improved market potential	Increased competition
– more customers	Higher costs, such as land, labor and utilities
– higher profits	Higher taxes
Better availability of labor	Greater travel time
Increased availability of business services, including banking and capital	
Improved productivity and efficiency	
To Individuals	
Broader employment opportunities	Higher taxes
Higher incomes	Increased cost of living, especially higher housing prices
Increased cultural/recreational opportunities	Psycho-social
Greater selection of goods and services	– lifestyle changes
Wider choice of housing	– deterioration of mental and physical health
To Society at Large	
Improvements to social infrastructure	Traffic congestion and accidents
– more and better public services such as medical care and education	Air pollution
– economies of scale for urban services	Water problems: quality and quantity
Healthier economy, including a stable, diversified structure	Other environmental damage
Broadened tax base	– damage/destruction of flora and fauna
Psychological benefits from increased exposure and sophistication	– depletion of resources
	– waste disposal
Increased rate of innovation and inventions	– light, sight, noise pollution
Lower incidence of poverty	Higher crime rate
	Urban sprawl and congestion
	Strain on public facilities; increased government size
	– greater demand for social services
	– more social problems, such as homeless
	– higher costs of government

Source: Center for Business Research, College of Business, Arizona State University

an urban area, a threshold frequently exists, beyond which additional benefits are minimal. A professional football team is a good example. At some point, the population of an area can support a team, with the benefit realized by individuals and by society at large. Further growth does not enhance this benefit, however. Only the business running the franchise may gain from further population gains, by increasing the likelihood of selling out the stadium at higher ticket prices.

With two million residents, the Phoenix metropolitan area already has passed the threshold for many benefits. That some cultural activities, for example, are not available may reflect a lack of sophistication more than a deficiency in size.

To society as a whole, some of the benefits of growth, such as improvements to the infrastructure, are counterbalanced by costs, such as higher taxes and the higher cost of public services.

Net Effect

When viewed purely in terms of economic productivity/efficiency, larger urban size probably brings more efficiency, making even the nation's largest urban areas less than an optimal size. However, many of the external economies (benefits) of large cities accrue to businesses, and most businesses enjoy a substantial net benefit from urban growth.

Though the lack of measurability of many benefits and costs makes determination of the net effect to individuals and to society difficult, most studies indicate that, at best, the net effect is nil. If problems such as crime, traffic congestion, environmental damage, and strain on public facilities become great, the net effect of urban growth on individuals and society will be negative.

In the Phoenix area, a bias toward growth probably will persist because of the net benefits most businesses realize. If private firms had to pay for their externalities (the costs they impose on society), their productivity might not be as great – nor their desire to locate in large cities.

Outlook

The literature raised the possibility that an urban area goes through an awkward stage – a population of approximately 1.5 to 2.5 million – during which further growth is highly inefficient.[1] Particularly during this period, in-migrants impose external costs on the metro area that exceed the external benefits gained by agglomeration.

This inefficiency relates to the inability of the existing infrastructure to handle the increased demand. In the Phoenix area, for example, traffic congestion already is a significant problem; every new resident who drives aggravates the situation. In contrast, once freeway construction is complete, the addition of another vehicle may not have such a high cost.

If enough progress is made toward resolving other issues facing the community, such as air pollution, the detrimental effects of further growth may not be as great as they are currently. Failure to address these issues, however, will intensify this painful stage.

SURVEY RESULTS

The Center mailed questionnaires only to *Arizona Business* subscribers who previously had indicated their job title to be at a senior management or higher level. Nearly two-thirds of the 280 respondents indicated they are an owner or partner in their firm. More than one-half of those firms employ fewer than 10 workers. Services and construction/real estate are the industries in which most respondents work. More than two-thirds have lived in the Valley more than 10 years; only 6 percent have been residents less than five years.

The questionnaire, including a tabulation of results, is reproduced as Table 2.

Growth Rate and Size

Net in-migration to the Phoenix area has averaged 47,000 people per year during the 1980s, but a record 64,000 people per year between 1984 and 1986. Providing this information, the survey asked respondents to pick an ideal in-migration rate and to do so from two perspectives: as an individual and as a representative of a business. Their two views were significantly different.

Responses from an individual perspective coalesced in the 0-to-45,000 range. Three-fourths considered an ideal rate to be fewer than 45,000 people per year – less than the average rate of not only the 1980s, but the 1970s as well. In contrast, two-thirds of the responses from a business perspective were for net in-migration of *at least* 45,000 people per year.

The population of the Phoenix area will exceed two million by the end of 1987 and could reach three million by the end of the century. This information produced another divergence of responses regarding an optimal size for the Phoenix area.

As individuals, 42 percent of respondents selected a population of less than two million – equal to or less than the current population. In contrast, responding as representatives of business, 91 percent think the optimal size would be larger than the existing population. This 91 percent is equally split among the categories of two-million-to-three-million, three-million-to-four-million, and four-million-or-more.

Benefits and Costs

Analogously, when asked to evaluate the benefits and costs of growth, respondents indicated the costs to business would be very different from the impact on individuals or society. Sixty-two percent believe growth is *very* beneficial to business, and another 23 percent think it is *somewhat* beneficial. In contrast, less than 45 percent feel growth bears a net benefit to individuals or to society at large (see Figure I).

The most frequently mentioned benefit of growth accrued to businesses: the potential for more customers and higher profits. For individuals and society at large, no benefit was listed nearly as often. Most frequently mentioned – more than twice as many times as the next response – was increased cultural/recreational opportunities. Respondents indicated other benefits would include greater choice of goods and services, wider choice of employment, improvements in the social infrastructure, a healthy and diversified economy, and a broadening of the tax base.

---

[1] Yezer and Goldfarb, "An Indirect Test of Efficient Urban Sizes," *Journal of Urban Economics*, January 1978, pp. 46-65.

TABLE 2
SURVEY OF *ARIZONA BUSINESS* READERS

1. Net in-migration to the Phoenix area has averaged 47,000 per year during the 1980s, but a record 64,000 per year between 1984 and 1986. What do you think an ideal annual rate would be? (Respond *both* as an individual and as a business on this and question 2.)

	Individual	*Business*
Zero or negative	15%	1%
Greater than zero, but less than 25,000	27	12
25,000 to 44,999	33	20
45,000 to 64,999	16	36
65,000 or more	9	31

2. The population of the Phoenix area will exceed two million by the end of 1987 and could reach three million by the end of the century. What do you think an optimal size would be?

	Individual	*Business*
Less than 2 million	42%	9%
2 million to 2,999,999	30	31
3 million to 3,999,999	15	30
4 million or more	13	30

3. How do you perceive the benefits/costs of growth in the Phoenix metropolitan area ?

	Very Beneficial	Somewhat Beneficial	Neither Costly nor Beneficial	Somewhat Costly	Very Costly
To individuals	14%	28%	9%	31%	18%
To businesses	62	23	3	8	4
To society at large	14	29	8	31	17

4. List the benefits you see resulting from the Valley's growth and increased size. *(Number of responses)*

To you as an individual:	*Increased cultural opportunities*	118
	Greater choice of goods/services	52
	Wider choice of employment	48
To your business:	*Market potential (more customers)*	213
To society at large:	*Improvements to infrastructure*	40
	Healthier, diversified economy	27
	Broadened tax base	26
	Psychological benefits	24

5. List the costs or problems you see resulting from the Valley's growth and increased size. *(Number of responses)*

To you as an individual:	*Higher taxes*	60		
	Increased cost of living	28		
To your business:	*Increased competition*	50	*Higher taxes*	40
	Greater travel time	46	*Higher costs*	36
To society at large:	*Traffic congestion*	180		
	Pollution (especially air)	141	*Water problems*	49
	Increased crime	77	*Other environmental damage*	43
	Urban sprawl/congestion	55	*Strain on public services*	42

6. How well planned and managed do you think the growth of the Phoenix area has been?

Very well	Well	Mediocre	Poorly	Very Poorly
1%	13%	42%	24%	20%

If you answered "well" or "very well" to question 6, please skip to number 8.

7. To whom do you attribute the inadequate planning and management? Please check one response per line. *(Number of responses)*

	Primarily	*Secondarily*	*None*
Business community	34	133	17
Developers	78	105	11
General Public	42	121	28
Public officials	210	20	2
Other (please specify: ____)	24	6	5

8. Your position in your firm:

Owner/partner	66%	Senior management	15%
Corporate officer	17	Other	2

9. Size of your firm, in number of employees

Less than 10	52%	250 or more	13%
10 to 249	34	not applicable	1

10. Industry of your firm

Manufacturing	5%	Services	42%
Construction/Real Estate	32	Trade	5
Finance/Banking	11	Other	5

11. Your length of residence in the Valley

Less than 5 years	6%
5 to 10 years	25
More than 10 years	69

Source: Center for Business Research, College of Business, Arizona State University

The perceived *costs* of growth and increased size were much more numerous, particularly to individuals and society. Most frequently cited were traffic congestion and air pollution, which also have topped the list on other Phoenix area surveys. Additional costs or problems included increased crime; higher taxes; urban sprawl and congestion; water problems – both quantity and quality; other environmental concerns, such as destruction of the desert and waste disposal; strain on public services and facilities; and higher costs.

Even for businesses, a variety of problems were mentioned, including more competition, increased travel time to deliver goods or attend meetings, higher taxes, and higher costs.

Rating the Planners

Respondents were asked to indicate how well Phoenix area growth has been planned and managed. Only 14 percent believe it has been well-planned. Forty-two percent chose the "mediocre" description; and 44 percent selected "poorly" or "very poorly."

Those who said growth has not been well-planned overwhelmingly indict public officials as primarily responsible (see Figure II). Developers are held next most responsible, with the business community and the general public also frequently selected as secondarily responsible.

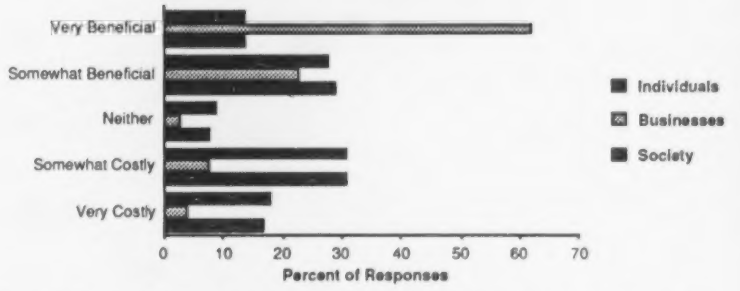
Subsample Responses

Some of the responses varied with the profile of the respondents. By size of firm, small companies do not want growth to be as fast as do larger businesses. Those who work in small firms view costs to the individual as greater than do other respondents.

By length of residence, those who have lived in the Phoenix area the longest desire, from an individual perspective, slightly slower growth and smaller eventual size than do shorter-term residents. The longer-term dwellers also think that growth is less beneficial to individuals. Finally, they place less blame for poor planning on developers.

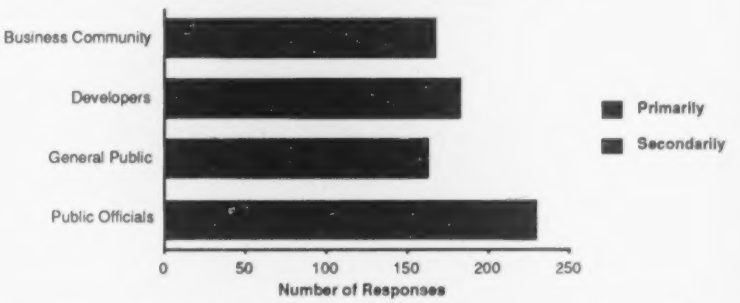
Responses varied most strikingly by industry. People who work in construction or real estate, from

FIGURE I
PERCEPTIONS OF BENEFITS/COSTS OF GROWTH TO VARIOUS GROUPS
Phoenix Metropolitan Area



Source: Survey of *Arizona Business* readers conducted by the Center for Business Research, College of Business, Arizona State University, June 1987.

FIGURE II
GROUP TO WHOM INADEQUATE GROWTH PLANNING AND MANAGEMENT IS ATTRIBUTED
Phoenix Metropolitan Area



Source: Survey of *Arizona Business* readers conducted by the Center for Business Research, College of Business, Arizona State University, June 1987.

both individual and business perspectives, want faster growth and believe a larger population size would be optimal for the Phoenix area. More than those who work in other industries, they perceive the benefits of growth as greater to all groups and view developers as less to blame for any mismanagement of growth. Given that construction and real estate firms stand to gain more from further growth than almost any other type of business, such responses are not surprising.

CONCLUSION

Net in-migration by individuals and businesses to the Phoenix metropolitan area is likely to continue. Initially, most migrants experience direct economic benefits, such as higher incomes and wider employment opportunities, which are great enough to outweigh any personal costs. The marginal costs to the community of a new migrant, such as provision of services and infrastructure, may outweigh the average costs to the migrant, but these marginal costs are not passed on to the migrant. Thus, that individual makes a rational decision in moving.

Once living in the area, however, the new resident begins to bear these marginal costs. If quantifiable expenses such as higher taxes and non-quantifiable problems such as air pollution become too great, the recent migrant may become disillusioned and decide that a net advantage may be gained by moving to another area. High mobility results, with the number of people entering the area usually outnumbering those who are leaving.

For example, despite problems that many perceive as serious, the Los Angeles metropolis continues to grow. In-migration, primarily from east of the Mississippi River, out-

paces the substantial out-migration. Thus, even if the costs of growth and urban size continue to rise for metropolitan Phoenix, the area probably will grow further, at least in the foreseeable future. The rate of growth could slow, however, as the Valley's problems cause out-migration to increase. Other factors, such as the aging American population, could reduce in-migration as well.

– **Tom R. Rex**
Research Manager

Survey Methodology

The Center for Business Research mailed surveys to 800 readers of *Arizona Business* during the third week of May. The survey was restricted to individuals living in Maricopa County who previously had indicated their job title to be at a senior management or higher level.

Because this segment of *Arizona Business* readers is not representative of the general population of the Phoenix area, these results cannot be generalized to the entire population. However, the respondents should be representative of the local business community.

By June 15, 280 responses had been received (35 percent). Thanks to all who participated!

Additional Urban Areas Desirable in Arizona

Although a high 75 percent of Arizona's population reside in urbanized areas (defined by the Census Bureau as an incorporated place plus the adjacent densely settled area that, together, have a minimum population of 50,000), the state has only two such areas – Phoenix and Tucson. For its size (Arizona ranked 27th nationally, with 3.2 million residents, in 1985), this distribution is unique. All other comparably sized states have at least three urbanized areas.

In particular, urban areas of approximately 75,000 to 200,000 residents are common in other states, but absent in Arizona. Areas of this size generally are large enough to have an infrastructure and a variety of trade and service firms. They provide a choice to both businesses and individuals, who may, in fact, prefer small urban areas to either small towns, which lack the necessary services, or large metropolitan areas, which typically have higher costs and more problems.

In addition to providing this choice, small urban areas within Arizona would promote interregional equity, spreading prosperity throughout the state. The difference in economic conditions between the urban and rural areas has been considerable during the 1980s. Growth centers such as Phoenix can harm outlying regions, at least in the short term.

STRATEGIES

Pursuit of new urban areas away from Phoenix and Tucson could involve creation of new cities or, more likely, development of existing towns. Such a policy would not have a substantial impact on existing urban areas because total population gains in the new areas would not be that great. Additionally, many of the potential residents of these new areas would not consider living in a larger urban area.

Small towns generally require an active policy to promote growth because their lack of infrastructure discourages many individuals and firms. Consequently, the town has difficulty attaining a size adequate to attract growth on its own.

One way to promote growth is to place public facilities in the town; a university is a key example. Thus, the proposals by Northern Arizona University and the University of Arizona to build branch campuses in Yuma and Sierra Vista, respectively, should be seriously considered. Like its urban areas, Arizona's universities are few and large. Two more universities (plus ASU West) would place Arizona's higher education system in better alignment with those of most states.

Growth might also be stimulated by establishing a major park in the area (the Arizona State Parks System has been described as deficient); by relocating state government offices, if possible; or by developing a special research or tourism facility in the area.

RETIREES

Another reason for encouraging the growth of additional urban areas is to ensure the attractiveness of Arizona to retirees – both permanent migrants and seasonal visitors (snowbirds). Retirees account for approximately one-fourth of the state's permanent net in-migrants. This share should increase in approximately 20 years, when the baby-boom generation reaches retirement age. Many of the older in-migrants have settled in planned retirement communities at the fringes of the urban areas.

Retirees do not benefit as much as working people from the growth and increased size of an urban area. The primary benefits – wider employment opportunities and higher incomes – do not apply to retirees, but they experience virtually all of the costs. Arizona's growing urban areas are likely to surround most of the retirement communities during the next 20 years, making alternative urban locations desirable if Arizona is to remain competitive in attracting older migrants.

– **Tom R. Rex**
Research Manager

"Migration," from page 1
the oil-dependent states of Texas, Oklahoma, Louisiana, Colorado and Alaska registered sharp declines in in-migration; these decreases preceded the worst of the energy slump by more than one year .

Out-migration typically varies less than in-migration, but the level of out-migration fell by sizable amounts during 1984-85 in California, Massachusetts, Michigan and Ohio. Net migration remained negative in each of the last three states, however. In some farming states, such as Iowa, out-migration increased.

Net in-migration improved sharply in California and by smaller amounts in Arizona and Georgia, while net out-migration became less in Ohio and Michigan. In contrast, net out-migration increased from Louisiana, Oklahoma and Iowa, while net in-migration slipped in Colorado and Texas.

Regionally, net migration improved along the Pacific, Mid-Atlantic and South Atlantic coasts and near the Great Lakes. However, net flows still were negative in the Great Lakes and Mid-Atlantic areas, as well as in the Great Plains and East South Central states. Net in-migration was limited to the Western region (mostly Arizona and California) and to the South Atlantic region (especially Florida and Georgia).

Appreciable levels of net in-migration occurred in just a handful of states. Florida's total was more than twice that of California; the latter's flow greatly exceeded the net flows of Georgia, Arizona and Texas. (Arizona's total surpassed that of Texas for the first time since the early 1970s.) Another gap existed between Texas' total and the net in-migration figures of North Carolina and Virginia.

ARIZONA MIGRATION

In-Migration

Flows of in-migrants to Arizona follow the cyclical pattern of the national economy, peaking during economic expansions. The 1984-85 increase was no exception. In-migration to Arizona from most Western states rose, with the exception of Washington, California and New Mexico. The Great Plains was the only other region from which Arizona in-migration gained.

Like the preceding years of the 1980s, in which Arizona ranked ninth or tenth in the number of in-migrants, the state was eighth on the list of 50 states for 1984-85. Texas, Illinois and Colorado provided comparably large numbers of in-migrants to Arizona, but their numbers were dwarfed by Californians moving to Arizona. When comparing the number of migrants from other states to the resident populations of those states, the rate of in-migration was highest from New Mexico, followed by other Western states.

Out-Migration

Though the number of its residents who moved to other states declined during 1984-85, Arizona still ranked a relatively high 20th. The states to which Arizonans moved changed little from prior years, with the number going to California more than double the total moving to New Mexico; Texas was also the destination of many Arizonans. The highest rate of out-migration, based on population, was to New Mexico, followed by Nevada and other Western states.

Net Migration

The increase in net in-migration to Arizona resulted from improved migration flows with most Western states, as well as with oil-dependent states and with most Midwestern states. The greatest net inflow came from Illinois. Economic problems in Colorado pushed that state into second position, followed by Midwestern states such as Iowa, Michigan, Ohio and Minnesota. Led by Wyoming, states in the Northern Rockies provided the highest rate of net migration to Arizona.

Arizona ranked fourth in net in-migration during 1984-85, placing the state between third and sixth nationally, as it has been throughout the 1980s. Alabama, Arkansas, Georgia, South Carolina and New Mexico were the only states to which Arizona suffered net out-migration.

Efficiency

Arizona's "efficiency," the ratio of in-migration to out-migration, rose from 141 in 1983-84 to 152 in 1984-85, the highest value since 1978-79. Total efficiency of Arizona's migration remained second nationally, to Florida's 172.

Compared to the ratios of other states, Arizona's migration efficiency rose markedly with Iowa, South Dakota, Idaho and Montana. The highest ratios occurred with Iowa (559), Wisconsin (351), Illinois (341) and South Dakota (326).

COMPARISON TO COMPETITORS

Since only a few states benefit from heavy net in-migration, Arizona has little "competition" for migrants. Poor economic conditions elsewhere have pared this list, with Oklahoma and Colorado dropping off during the 1980s. Of the Western states, California was the only real competitor during 1984-85. Despite growing economic problems, Texas still added nearly as much population from migration as did Arizona, though this competition probably ceased temporarily during 1986, when energy problems slowed the Texas economy.

With a net migration jump during 1984-85, California pulled well ahead of Arizona and marked its strongest year since IRS data became available in the early 1970s. Though California's efficiency rose to 123, it remained below Arizona's ratio. California continued to experience net out-migration to Arizona, as well as to Nevada and some Southern states.

Net in-migration to Texas was the weakest since the early 1970s, preceding the first oil shock. The state suffered net out-migration to Arizona, as well as to a number of Western, Southern and Northeastern states.

Florida and Georgia also attract many migrants, but the geographic sources of their new residents (mostly East Coast) largely differ from those of people moving to Arizona. Florida's situation hardly changed in 1984-85; it remained first, by large margins, in both net migration and efficiency. Georgia's growth remains the major story of the 1980s, however. Its net in-migration during 1984-85 surpassed Arizona's for the second straight year. Its efficiency rose from 12th in 1980-81 to third in 1984-85 (144).

Other states that briefly attracted many new residents during the 1970s or early 1980s include Washington, Oregon, Nevada, Colorado and Oklahoma. During 1984-85, Oklahoma and Oregon experienced net out-migration, while Washington, Nevada and Colorado gained slight net in-migration.

– Tom R. Rex
Research Manager

Valley Inflation Moderates During Second Quarter

Following a surge during first quarter 1987, inflation in the Phoenix metropolitan area lessened during the second quarter. However, the seasonally adjusted 1.1 percent gain still exceeded the rates of each of the six quarters from third quarter 1985 through fourth quarter 1986.

Before seasonal adjustment, the Metropolitan Phoenix Consumer Price Index rose 1.3 percent, to 200.7 (1977 = 100). The index was 4.2 percent higher than it was during second quarter 1986.

COMPONENT INDEXES

Increases in transportation costs accounted for much of the second quarter's inflation. The large gain in the transportation category was the second in a row, following deflation throughout 1986 (see Table 1).

Though gasoline prices surged further early in the quarter before stabilizing, price hikes are common in the spring. Thus, the seasonally adjusted gain was a relatively moderate 1.9 percent. Excluding gasoline prices, which have been volatile, the underlying annual rate of inflation remained approximately 4 percent. In the second quarter, the underlying rate slightly exceeded the four quarterly rates of 1986 but fell short of the quarterly rates measured during 1985.

Food and Beverages

Prices of food and beverages rose modestly during the second quarter, the third straight quarter in which little change was measured. Prices of restaurant meals declined for the third consecutive quarter and were lower than in second quarter 1986 (see Table 2).

Grocery prices rose more rapidly than in the two prior quarters. Prices of meats, poultry, fish and eggs climbed 2.3 percent, offsetting a decline during the first quarter. Egg prices, however, dropped substantially for the second successive quarter. Though prices of fruits and vegetables jumped 5.1 percent during the second quarter, they were only 4.2 percent higher than in second quarter 1986. The indexes of the other major subcategories barely changed.

Housing

Housing costs rose only 0.2 percent during second quarter 1987, the second smallest gain since seasonally adjusted changes became available in first quarter 1984. Homeowners' costs went up just 0.1 percent, the smallest advance since the methodology for collecting these prices changed in 1983. Renters' costs fell for the third straight quarter. Affected by high vacancy rates, apartment rents were no higher in second quarter 1987 than they were one year earlier.

Fuel and other utility costs increased moderately, mostly because of a hike in piped gas rates. The index for the household furnishings and operations category barely changed, for the third time in the last four quarters.

Transportation

Following an 8.1 percent surge during first quarter 1987, transportation costs advanced an additional 3.0 percent during the second quarter. Tempered inflation in gasoline prices accounted for the difference in the rates of the first and second quarters.

Several subcategories contributed to the second quarter advance. Used car price inflation accelerated further; new car prices rose substantially; and vehicle insurance premiums continued to jump. In addition, price increases for vehicle parts and equipment soared to the highest level in three years, in the wake of a decrease during the first quarter.

In contrast, vehicle finance charges dropped for the sixth consecutive quarter, while public transportation costs rose only modestly.

Medical Care

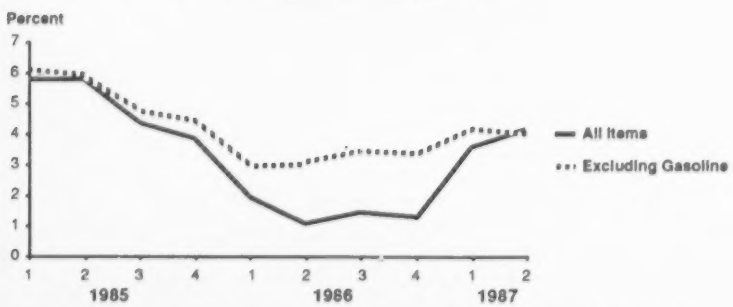
Health care costs recorded their largest gain of the past two years, due to higher inflation rates in most subcategories. Prescription drug prices rose 4.7 percent, the largest increase since seasonal adjustment began in 1984.

Other Categories

Apparel and upkeep costs jumped during the second quarter, continuing the pattern of alternating quarters of gains and reductions. The net effect over the four quarters ending with second quarter 1987 was slight deflation.

Entertainment costs declined, partially offsetting the first quarter advance. Little change was measured in prices of other goods and services.

FIGURE I
METROPOLITAN PHOENIX CPI
Seasonally Adjusted Percent Change
From Same Quarter, Prior Year



Source: Center for Business Research, College of Business, Arizona State University, in cosponsorship with Valley National Bank.

COMPARISON AREAS

Before seasonal adjustment, the Phoenix area's inflation rate was identical to the national average for the second quarter (see Table 3). Rates were comparable in most major categories, except that inflation in

the transportation category was higher in the Valley, neutralized by lower inflation in apparel and upkeep and in entertainment.

Compared to one year earlier, the Phoenix area inflation rate was comparable to the national average. Lower inflation in most major categories negated a slightly greater gain in entertainment costs and a much larger increase in transportation expenses. The Valley experienced bigger increases in gasoline prices at the same time that prices in other transportation subcategories were shifting upward from deflation or slight inflation.

OUTLOOK

The second quarter inflation rate in the Phoenix metropolitan area was slightly less than had been expected at the beginning of the quarter, but not different enough to alter the outlook for the next few quarters. The lower second quarter rate resulted from continued modest increases in the costs of food and beverages and from the near absence of inflation in the housing category.

In the next few quarters, seasonally adjusted inflation rates are likely to remain similar to the 1.1 percent advance measured during the second quarter. Lower inflation in the transportation category probably will be offset by slightly greater gains in both the housing and the food and beverages categories.

The result should be an annual rate that accelerates from the 4.2 percent recorded during the year ending second quarter 1987 to more than 5 percent by year-end 1987. The annual average during 1987 should be near 4.5 percent.

Much of the acceleration during 1987 in the all-items rate results from higher gasoline prices. Excluding gasoline, the underlying inflation rate should remain near 4 percent. However, the all-items rate, which dipped below the underlying rate during 1986, already had surpassed it during second quarter 1987 because of the higher gasoline prices (see Figure I).

– **Tom R. Rex**
Research Manager

TABLE 1
PERCENT CHANGES IN
METROPOLITAN PHOENIX CONSUMER PRICE INDEX

		Seasonally Adjusted from Preceding Quarter					
Expenditure Category	*Relative Importance*	*1st 1986*	*2nd 1986*	*3rd 1986*	*4th 1986*	*1st 1987*	*2nd 1987*
ALL ITEMS	100.0	-0.2	0.4	0.6	0.5	2.1	1.1
Food and Beverages	18.7	0.5	1.0	2.3	0.1	-0.2	0.5
Housing	39.5	0.7	0.2	1.0	0.4	0.5	0.2
Apparel and Upkeep	4.8	-3.3	5.6	-2.5	1.9	-2.5	2.8
Transportation	21.2	-2.5	-1.9	-1.1	-0.2	8.1	3.0
Medical Care	6.9	1.3	1.7	0.2	1.2	1.8	2.7
Entertainment	4.6	-1.7	2.4	-0.6	4.5	2.4	-1.2
Other Goods and Services	4.3	1.7	0.7	2.1	0.6	2.0	0.3

TABLE 2
METROPOLITAN PHOENIX CONSUMER PRICE INDEX
Second Quarter 1987

	Index (1977 = 100)		Percent Change from	
Expenditure Category	*Last Quarter*	*This Quarter*	*Last Quarter**	*Year-Ago Quarter*
ALL ITEMS	198.0	200.7	1.1	4.2
Food and Beverages	181.4	182.2	0.5	2.2
Food	181.5	182.3	0.6	2.1
Food at Home	179.7	181.5	1.5	3.6
Cereal and Bakery Products	203.3	203.7	0.1	3.0
Meats, Poultry, Fish, and Eggs	164.9	165.1	2.3	5.6
Dairy Products	168.7	168.2	-0.5	3.7
Fruits and Vegetables	186.3	198.0	5.1	4.2
Other Food at Home	173.0	172.4	-0.1	0.9
Food Away from Home	182.0	180.9	-1.2	-0.5
Housing	204.3	206.2	0.2	2.0
Shelter	223.1	222.4	-0.1	2.0
Renters' Costs**	118.0	116.8	-0.6	0.4
Homeowners' Costs**	113.6	113.7	0.1	3.0
Fuel and Other Utilities	165.6	176.9	1.3	2.7
Gas (piped) and Electricity	176.2	195.0	1.7	3.3
Household Furnishings/Operations	155.0	155.3	0.1	1.1
Apparel and Upkeep	146.5	150.8	2.8	-0.6
Transportation	189.0	196.0	3.0	10.0
Private Transportation	186.3	193.6	3.2	10.6
New and Used Cars	200.0	208.5	4.8	9.1
Motor Fuels	158.0	169.9	1.9	9.7
Public Transportation	232.6	235.0	0.6	2.0
Medical Care	280.1	284.1	2.7	6.2
Entertainment	212.1	204.7	-1.2	4.9
Other Goods and Services	185.9	186.9	0.3	5.5

*Seasonally adjusted **Base period is second quarter 1983.

TABLE 3
METROPOLITAN PHOENIX AND UNITED STATES
CONSUMER PRICE INDEXES
Second Quarter 1987

	Percent Change from Last Quarter*		Percent Change from One Year Ago	
Expenditure Category	*Phoenix*	*United States*	*Phoenix*	*United States*
ALL ITEMS	1.3	1.3	4.2	3.8
Food and Beverages	0.4	0.7	2.2	4.7
Housing	0.9	1.0	2.0	2.9
Apparel and Upkeep	2.9	4.6	-0.6	5.6
Transportation	3.7	1.5	10.0	2.9
Medical Care	1.4	1.4	6.2	6.8
Entertainment	-3.5	1.2	4.9	3.3
Other Goods and Services	0.5	0.6	5.5	5.8

*Not seasonally adjusted

Source (Tables 1, 2 and 3): Metropolitan Phoenix data compiled by the Center for Business Research, College of Business, Arizona State University, in cosponsorship with Valley National Bank; other data in Table 3 are from the U.S. Department of Labor, Bureau of Labor Statistics.

June Purchasing Indicators Stay Positive; Inflation Moderates

All of the key purchasing indicators continued positive in June, for the sixth consecutive month. New order bookings increased at the strongest rate in almost three years; inventory additions continued; delivery times lengthened; and production and employment both registered good hikes. The Arizona economy reached new high ground as the first half of 1987 came to a close.

Improvement in the nation's trade deficit, caused by the lower dollar, and increased productivity of U.S. firms will help to extend the growth curve over the balance of the year. While further price hikes will occur, inflation appears to be contained at a workable level. However, as the economy continues to grow, Arizona firms will be challenged by lengthened delivery times, spot shortages of purchased items, and problems in finding an adequate supply of skilled workers.

Table 1 presents the results of the June survey of Arizona purchasing managers. Analysis of these results follows.

PRICES

Prices paid for purchased goods and services accelerated in June at the same rate as in May. The rate of inflation during the first half of the year was consistently higher than during almost any month of 1986, but it has stabilized over the past three months. A return to double-digit price hikes seems unlikely. If inflation continues at a moderate pace during the second half of 1987, it poses no threat to the measured expansion.

DELIVERY TIME

Delivery time on vendor shipments increased sharply, as suppliers' backlogs grew larger. The lead time indicator's increase rate in June was almost double that of May and the largest in almost three years (since July 1984) – strong evidence that the economy is building at a healthy rate.

INVENTORY LEVELS

Inventory levels of purchased materials continued to grow and at a rate somewhat greater than in the previous two months. The net additions to inventory that started in January and proceeded through each of the first six months of 1987 have strengthened the economy's staying power.

NEW ORDERS

New orders received by Arizona firms recorded another strong advance in June; it was the largest jump not only of the second quarter but since March. Consistently strong new order increases have been recorded for each month of 1987 and are providing the thrust needed to maintain the momentum.

PRODUCTION

Production continued to grow, although at a lower rate than in May and at the lowest rate since January. While the production rate is not keeping pace with the incoming order flow (possibly a reflection of the summer doldrums), it has been strong during the first half of 1987.

EMPLOYMENT

Employment rose for the sixth consecutive month but, as with production, at a slower rate than in May and at the lowest rate since January. Employment growth has been strong so far this year and should continue to be healthy in the months immediately ahead.

PURCHASES

Purchases of materials and supplies went up in June at a greater rate than in May. The purchases indicator began to enjoy strong increases in January and has helped to propel the economy upward.

– Harold Fearon

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona Purchasing Survey

Now in its 25th year of monthly reporting, Dr. Harold Fearon's survey of Arizona business conditions utilizes data from a questionnaire sent to members of the purchasing management associations of Arizona and southern Arizona. It asks them to indicate the direction of activity - higher, unchanged, or lower - of seven key measures of economic activity in the month just ended. These purchasing managers deal daily with supply, demand, and price factors in the marketplace; their aggregate readings have accurately charted the state's economic course for two decades, providing timely data on turning points.

TABLE 1
JUNE PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (June compared to May)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	35	62	3
Delivery time from vendors	37	57	6
Purchased materials inventory level	36	43	21
New orders received	48	35	17
Production	36	48	16
Employment	24	64	12
Purchases	52	33	15

Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona.

Arizona Leading Index Changes Course, Moves Up in May

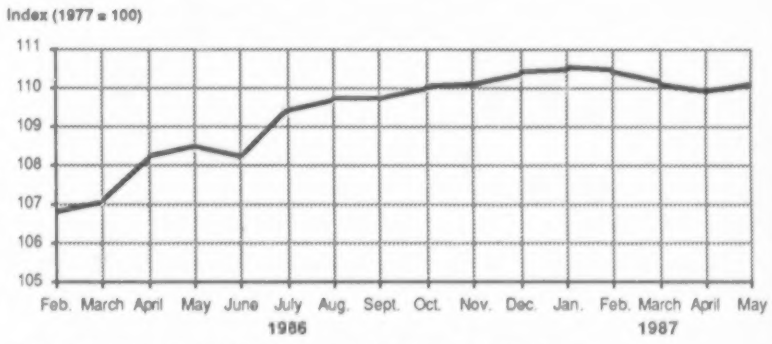
The Arizona Index of Leading Economic Indicators advanced in May, reversing direction after three consecutive months of decline. The May index reached 110.1, up .2 percent from April's 109.9 (see Figure I).

Five of the index's 10 components increased in May. The greatest positive contribution came from Arizona manufacturing hours worked; this indicator rose to 40.9. While some workers gained hours, others faced layoffs. First-time unemployment insurance claims increased slightly from the previous month. Sensitive materials prices were up slightly, pulling the index upward.

The greatest negative contribution to the index came from a decrease in the money supply, the third in the past four months. This drop brought the money supply to its lowest level since October 1986. Another key indicator closely watched by analysts, the value of residential building permits, declined for the third consecutive month.

Three components derived from a survey of Arizona purchasing managers exerted a positive influence on the index. Inventory levels, new orders, and production all increased on a seasonally adjusted basis. However, those surveyed reported declines in delivery times and employment.

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Economic Outlook Center, College of Business, Arizona State University

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution+			
	Feb.	*Mar.*	*Apr.*	*May*
Delivery Time*	.08	.04	.01	-.04
Inventory Levels*	-.01	.10	-.08	.04
New Orders*	-.03	.07	-.05	.01
Production*	.00	.06	-.04	.02
Employment*	.05	.01	.00	-.04
Residential Building Permits	.25	-.05	-.07	-.01
Unemployment Insurance Claims	.01	-.13	.09	-.02
Average Workweek, Manufacturing	-.07	-.07	-.09	.19
Money Supply	-.20	-.13	.02	-.13
Change in Sensitive Materials Prices	-.19	-.11	.00	.18
OVERALL INDEX CHANGE (%)	-.1	-.3	-.2	.2

+The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Economic Outlook Center, College of Business, Arizona State University

OUTLOOK

Although the leading index turned up slightly in May, the evidence does not indicate that the economic expansion, which is now more than four years old, is finding new vigor and vitality. With the money supply declining and the Arizona construction sector continuing to weaken, national and local conditions for a last-gasp spurt of activity are simply not present. For the remainder of 1986, the index signals slow-but-positive growth, at a pace well below that now viewed as "normal" by many Arizonans.

– **Lee R. McPheters,** *Director Economic Outlook Center*

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT						
(In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	4th Qtr.	51.846	0.4	5.5	NA	NA
Arizona - 1982 Dollars	4th Qtr.	44.902	-0.4	3.1	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	2nd Qtr.	200.7	1.4	4.2	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	May	110.1	0.2	1.5	NA	NA
BUILDING PERMITS						
(Total Dollar Value in Thousands)						
Maricopa County	May	359,168	11	-8	1,662,512	-8
Pima County	May	44,224	-26	-42	265,973	-29
Balance of State	May	57,899	2	7	246,190	-6
Arizona	May	461,291	-11	-11	2,174,675	-11
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	May	2,472	4	-58	12,459	-46
Pima County	May	394	-37	-63	3,20[illegible]	-32
Balance of State	May	926	16	-6	4,165	-27
Arizona	May	3,792	0	-52	19,831	-41
HOME SALES						
Maricopa County - Number	June	6,450	25	-1	30,850	8
Maricopa County - Median Price	June	81,000	1.9	2.3	79,300	3.7
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	1st Qtr.	102	4.1	12.1	NA	NA
Metropolitan Phoenix - Resale Homes	1st Qtr.	122	7.0	14.0	NA	NA
MORTGAGE INTEREST RATES						
(Conventional, 30-year, Fixed-rate)						
Maricopa County	June	10.4	-1.0	-1.9	NA	NA
POPULATION ESTIMATES						
(In Thousands)						
Maricopa County	1st Qtr.	1,961	1.0	4.2	NA	NA
Arizona	1st Qtr.	3,422	0.9	3.6	NA	NA
ELECTRICAL POWER SALES						
(In Millions of Kilowatt Hours)						
Arizona	May	3,140	12.7	4.6	14,702	9.3

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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